

CLAIMS

1. In a conveyor, comprising a cyclic drive means transporting a fluid medium having at least one object entrained therein through an enclosed passage, said drive means interposed between upstream and downstream segments of said passage and comprising a first working zone in a negative drive cycle and a second working zone in a positive drive cycle; a method of optimizing at least one value of said object entrained fluid medium characteristic of said transporting of said object entrained fluid medium with respect to drive means energy consumption comprising:  
providing at least one shunt passage from said second working zone to said first working zone;  
flowing said object entrained fluid medium through said shunt passage from said second working zone to said first working zone thereby changing said at least one value of said object entrained fluid medium and the difference in magnitude between said cycles;  
modulating the flow through said shunt passage to optimize said at least one value with respect to drive means energy consumption.
2. The method of optimizing of claim 1, wherein said modulating comprises frequency modulation.
3. The method of optimizing of claim 1, wherein said modulating comprises amplitude modulation.
4. The method of optimizing of claim 1, wherein said modulating comprises a standing wave input.
5. The method of optimizing of claim 4, wherein said standing wave

modulation is achieved by modulating the geometry of a minimum cross section of said shunt passage.

6. The method of optimizing of claim 1, wherein said modulating comprises a parametric input.
7. The method of optimizing of claim 1, wherein said modulating comprises discrete input.
8. The method of optimizing of claim 1, wherein said drive means comprises a displacement means.
9. The method of optimizing of claim 8, wherein said displacement means comprises a pressure drop.
10. The method of optimizing of claim 1, wherein said object entrained fluid medium is in turbulent flow.
11. The method of optimizing of claim 1, wherein said shunt passage comprises a filter.
12. The method of optimizing of claim 1, wherein said object is said fluid medium and performs a function of said carrying medium.
13. A method of dynamic transporting of object with a flow of a carrying medium, comprising the steps of:  
applying to a carrying medium an action which is created in an action means during a process of a conversion of an energy supplied to the action means so that a flow of a carrying medium created in this way

acts on an object for providing a process of its transporting in a given direction; and

performing a given modulation of a value of said action in said action means, includes providing a given dynamic periodic change of a value of at least one parameter which is dynamically connected with a process of conversion in the action means of said energy supplied to it into said action, with a simultaneous given change of said value of said parameter in each period of its change during said process of transporting of said object,

to provide a given dynamic periodic change of said value of said action on said carrying medium, so that said flow of said carrying medium which is created dynamically moves with a given dynamic periodically changing sign-alternating acceleration during a process of transporting of said object.

14. The method of claims 13, wherein said object is said fluid medium and performs a function of said carrying medium.
15. The method of claim 13, wherein said object is structurally not connected with said action means during said process of transporting.
16. The method of claim 13, wherein said object is structurally connected with said action means during said process of transporting.
17. The method of claim 13, wherein said action means is formed as a means for a direct energy action.
18. The method of claim 13, wherein said action means is formed as a pressure drop means.

19. The method of claim 13, wherein said object has a structural part which performs a function of a converting element of said action means to provide a process of conversion of said energy supplied to said action means and generated during a forced interaction of said structural part of said object with said medium which is a flowing medium.
20. The method of claim 13, wherein said modulation of said value of said action in said action means includes introduction of values of its parameters selected from a group consisting of a frequency, a range and a law of a dynamic periodic change of said value of said action during said process of transporting of said object.
21. The method of claim 20; and further comprising changing a value of at least one of said parameters of said modulation in dependence on a change of at least one characteristic to be controlled, which is connected with said process of transporting of said object, to energy optimize at least one parameter which is connected with said process of transporting.
22. The method of claim 21; and further comprising using as said control characteristic, of values of at least one of parameters of conversion of energy of movement of said flow of carrying medium into another type of energy during said process of transporting.